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Date:

By:

April 8, 2005

Jennifer A. [Signature]

Attorney Docket No. 100717-660 (KGB)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT : Christoph METHFESSEL et al  
 SERIAL NO. : 10/523,784 [This is a 371 of PCT/EP2003/008299]  
 CUSTOMER NO. : 27384  
 FILED : February 9, 2005  
 FOR : DEVICE AND METHODS FOR CARRYING OUT  
 ELECTRICAL MEASUREMENTS ON MEMBRANE BODIES  
 ART UNIT : To Be Assigned  
 EXAMINER : To Be Assigned

Commissioner for Patents  
 PO Box 1450  
 Alexandria, VA 22313-1450

**SECOND INFORMATION DISCLOSURE STATEMENT**

SIR:

Pursuant to 37 CFR §§ 1.56, 1.97 and 1.98, Applicants respectfully request that the Examiner consider the references listed on the attached Form PTO-1449.

**I. Timeliness, Fees and Certifications in lieu of Fees**

☒ A. This information disclosure statement is being filed within three months of the filing date of the application, or within three months of entry into the national stage, or before the mailing of a first Office Action on the merits. Pursuant to 37 CFR § 1.97(b), consideration of this information disclosure statement does not require a fee or a statement under 37 CFR § 1.97(e). However, should the Assistant Commissioner determine that a fee is, in fact, due, the Assistant Commissioner is hereby authorized to charge the fee to Deposit Account No. 14-1263.

☐ B. This information disclosure statement is being filed after the period in A above, but before the mailing of either a final action or a notice of allowance. Pursuant to 37 CFR § 1.97(c), consideration of this information disclosure statement requires a fee or a statement under 37 CFR § 1.97(e):

☐ 1. The Assistant Commissioner is hereby authorized to charge the fee set forth in 37 CFR § 1.17(p) to Deposit Account No. 14-1263.

☐ 2. Applicants hereby state that each item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement.

☐ 3. Applicants hereby state that no item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign patent application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this information disclosure statement was known to any individual designated in 37 CFR § 1.56 more than three months prior to the filing of this information disclosure statement.

☐ C. This information disclosure statement is being filed after the period specified in B above, but on or before the payment of the issue fee. Pursuant to 37 CFR § 1.97(d), consideration of this information disclosure statement requires a petition, which Applicants hereby request, and payment of the petition fee, which is set forth in 37 CFR § 1.17(i), and which the Assistant Commissioner is hereby authorized to charge to Deposit Account No. 14-1263. Consideration of this information disclosure statement also requires a statement under 37 CFR § 1.97(e):

☐ 1. Applicants hereby state that each item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement.

☐ 2. Applicants hereby state that no item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign patent application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this information disclosure statement was known to any individual designated in 37 CFR § 1.56 more than three months prior to the filing of this information disclosure statement.

## **II. Copies of Listed References**

☒ A. Copies of all references listed on the attached Form PTO-1449 are being supplied. Copies of U.S. patents are not included pursuant to Pre-OG Notice dated July 11, 2003.

☐ B. Copies of all references listed on the attached Form PTO-1449 have already been supplied during the prosecution of prior application Serial No. \_\_\_\_, filed \_\_\_\_, from which the present application claims priority pursuant to 35 USC § 120. Therefore, pursuant to 37 CFR § 1.98(d), copies of the references listed on the attached Form PTO-1449 are not now being supplied.

☐ C. This application is a PCT national stage application, all references listed on the attached Form PTO-1449 were cited in the international search report and the copies of the references listed on the attached Form PTO-1449 are in this national stage file. Therefore, copies of the references listed on the attached Form PTO-1449 are not now being supplied.

## **III. Concise Statement of Relevance**

☒ A. All references listed on the attached Form PTO-1449 are in the English language, and, therefore, a concise statement of relevance is not required.

☐ B. All references listed on the attached Form PTO-1449 are referred to in the specification and/or were cited in the international search report, and a copy of that search report, which indicates the degree of relevance found by the Search Authority, is attached.

The Examiner will note that English language counterparts or Abstracts of non-English language references are also enclosed, as follows:

- ☐ C. All references listed on the attached Form PTO-1449 were cited in the search report issued by the \_\_\_\_\_ Patent Office, and an English-language version of that search report, which indicates the degree of relevance found by that Patent Office, is attached.
- ☐ D. This application is a PCT national stage application, all references listed on the attached Form PTO-1449 were cited in the international search report, and a copy of that search report, which indicates the degree of relevance found by the International Search Authority, is attached.
- ☐ E. All listed on the attached Form PTO 1449 were cited during the prosecution of the prior application indicated above under II.B.

**IV. Additional Information**

- ☐ A. In addition to the references listed on the attached Form PTO-1449, Applicants wish to bring to the attention of the Examiner the following abandoned or co-pending U.S. patent applications:

[Pursuant to 37 CFR § 1.98(a)(2)(iii), copies of these applications are not being submitted.]

- ☐ B. In addition to the references listed on the attached Form PTO-1449, Applicants wish to bring to the attention of the Examiner the information provided on the attached sheet.

Consideration of the foregoing in relation to this application is respectfully requested.

Respectfully submitted,

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By 

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<b>INFORMATION DISCLOSURE          STATEMENT BY APPLICANT'S</b> (Form PTO-1449)		Application Number	10/523,784 [This is a 371 of PCT/EP2003/008299]
		Filing Date:	February 9, 2005
		First Named Inventor	Christoph METHFESSEL et al
		Art Unit	To Be Assigned
		Examiner Name:	To Be Assigned
Sheet 1	of 2	Attorney Docket Number:	100717-660 (KGB)

### U.S. PATENT DOCUMENTS

Examiner's Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup>	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA	US - 2002/093305	07-18-2002	Zeh	

### FOREIGN PATENT DOCUMENTS

Examiner's Initials*	Cite No.	Foreign Patent Document Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup>	Publication Date MM-DD-YYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
	AB	WO 90/08424	07-26-1990	Siemens AG		

### NON PATENT LITERATURE DOCUMENTS

Examiner's Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>6</sup>
	AC	HODGKIN, A.L., et al. "Ionic currents underlying activity in the giant axon of the squid." (1949). Arch. Sci. Physiol. 3, 129-150.	
	AD	HODGKIN, A.L., et al. "Measurements of current-voltage relations in the membrane of the giant axon of Loligo." (1949). J. Physiol. (London) 117, 500-544	
	AE	NEHER E. et al "Single-channel currents recorded from membrane of denervated frog muscle fibres." (1975) Nature 260, 779-802	
	AF	HAMILL, O.P., et al. "Improved patch-clamp techniques for high-resolution current recording from cells and cell-free membrane patches." (1981). Pflügers Archiv 391, 85-100	
	AG	SIGWORTH, FJ et al. "Patch clamp on a chip." (2002) Biophys. J. 82, 2831-2832	
	AH	FERTIG, N., et al. "Whole Cell Patch Clamp Recording Performed on a Planar Glass Chip." (2002) Biophys. J. 82, 3056-62	
	AI	ROSAT, J.-P., et al. "Patch-clamp on a chip - a reality." (2002) Analytica 2002 pp. 4-10	
	AJ	SCHULZ R, et al. "Neuronal nicotinic acetylcholine receptors from Drosophila: Two different types of $\alpha$ subunits coassemble within the same receptor complex." (2000) J. Neurochem. 74, 2537-2546	
	AK	DECKER K. et al. "Automatisierte elektrophysiologische Wirkstoffsuche [automated electrophysiological active-agent research]." (2002) Laborpraxis / LabFuture, pp. 72-79	
	AL	HANKE, W. (1985) Reconstitution of Ion Channels. CRC Critical Reviews Biochemistry 19, 1-44	

EXAMINER SIGNATURE: /Leon Y. Lum/	DATE CONSIDERED: 09/22/2008
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number (optional). See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. Applicant is to place a check mark here if English language Translation is attached. The collection of information is required by 37 U.S.C. 1.197 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. If you need assistance in completing this form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /L.Y.L./

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<b>INFORMATION DISCLOSURE                  STATEMENT BY APPLICANT'S</b> (Form PTO-1449)		Application Number	10/52,374 [This is a 371 of PCT/EP2003/008299]
		Filing Date:	February 9, 2005
		First Named Inventor	Christoph METHFESSEL et al
		Art Unit	To Be Assigned
		Examiner Name:	To Be Assigned
Sheet 2	of 2	Attorney Docket Number:	100717-660 (KGB)

**NON PATENT LITERATURE DOCUMENTS continued**

Examiner's Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>5</sup>
	AM	SACKMANN E. et al. "Supported Membranes on soft polymer cushions: fabrication, characterization and applications" (2000) TIBTECH 18, 58-64	
	AN	LOIDL-STAAHLHOFEN, A., et al. "Solid-Supported Biomolecules on Modified Silica Surfaces - A Tool for Fast Physicochemical Characterization and High-Throughput Screening." (2001) Advanced Materials 13, 1829-1834	
	AO	RAGUSE, B., et al. "Tethered Lipid Bilayer Membranes: Formation, and Ionic Reservoir Characterization." (1998). Langmuir 14, 648-659	
	AP	MAZET, J.L. et al. "Voltage Dependence of liver gap-junction channels reconstituted into liposomes and incorporated into planar bilayers." (1992) European Journal of Biochemistry 210, 249-256	
	AQ	AUSTIN, C.D. "The Connexins: A Family of Gap Junction Proteins." (1993) Einstein Quarterly Journal of Biology and Medicine 10, 133-142	
	AR	GOODENOUGH, D.A., et al. "Connexins, Connexons, and intercellular communication." (1996) Annu. Rev. Biochem. 65:475-502	
	AS	JORDAN K., et al. "Trafficking, Assembly, and Function of a Connexin43-Green Fluorescent Protein Chimera in Live Mammalian Cells." (1999) Molecular Biology of the Cell 10, 2033-2050	
	AT	BREWER, G.J. "Reconstitution of lens channels between two membranes." (1991) Chapter 19 in: Biophysics of Gap Junction Channels, Editor: C. Peracchia, CRC Press Boca Raton, Ann Arbor, Boston.	
	AU	PHELAN, P. "Gap Junction Communication in Invertebrates: The Innexin Gene Family." (2000) Current Topics in Membranes 49, 389-422	
	AV	ALLEN, J.R. "Starting now a review of reduced voltage A.C. motor starters." Textile, Fiber and Film Industry Technical Conference (1992), XP010061787	

EXAMINER SIGNATURE: /Leon Y. Lum/	DATE CONSIDERED: 09/22/2008
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. \*Applicant's unique citation designation number (optional). \*See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. \*Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). \*For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. \*Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. \*Applicant is to place a check mark here if English language Translation is attached. The collection of information is required by 37 CFR 1.197 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. If you need assistance in completing this form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

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